Malmstrom Air Force Base, 564th Missile Squadron, Tango Alert Facility
Southwest of intersection of West Heights and South Heights Roads
Vicinity of Valier
Pondera County
Montana

HAER NO. MT-138-E

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
Intermountain Support Office - Denver
National Park Service
P.O. Box 25287
Denver, Colorado 80225-0287

HISTORIC AMERICAN ENGINEERING RECORD
MALMSTROM AIR FORCE BASE, 564th MISSILE SQUADRON
TANGO MISSILE ALERT FACILITY

HAER No. MT-138-E

Location: Southwest of intersection of West Heights Road and South Heights Road, 1 mile south of Lake Frances, and 3.2 miles south of Valier and State Highway 44 in the SE ¼ of Section 20, Township 29 North, Range 5 West, Pondera County, Montana

UTM: Zone 12 / 405320 Easting / 5345177Northing

Date of Construction: Constructed as a Minuteman II system in 1965-1966; converted to a Minuteman III system in 1975

Designer: Ralph M. Parsons Company, Los Angeles, California

Builder: Morrison Knudsen Company and Associates

Present Owner: U.S. Air Force (USAF), Malmstrom Air Force Base

Present Use: Deactivated Missile Alert Facility, 564th Missile Squadron, 341st Missile Wing

Significance: The Tango Missile Alert Facility is one of five MAFs associated with the 564th, an Intercontinental Ballistic Missile (ICBM) squadron based at Malmstrom Air Force Base, Montana. An MAF houses the personnel and equipment required to remotely monitor, control and command operations of a group of 10 Minuteman missiles. Each missile is deployed in its own unmanned below-ground silo known as a Launch Facility (LF). An MAF's ten missiles surround its with each LF located at least 3 miles from the MAF.

The Tango and the 564th Missile Squadron's (MS) four other MAFs were determined representative examples of the infrastructure and unique technological system developed in response to the nation's Cold War defense and strategic deterrence needs. As such, they are historically significant for their association with the late twentieth-century defense policy of the United States. Military leaders found the rural Montana countryside surrounding Malmstrom Air Force ideally suited the needs of the Minuteman program, being situated within striking range of the Soviet Union. Of greater importance was the region's low population density which meant comparatively minimal loss of life in the event of nuclear attack.

Additionally, the Tango and the 564th MS's four other MAFs embody some key aspects defining the Minuteman's technological superiority over its ICBM predecessors. Among the most significant of those was the consolidation of monitoring, control and command operations for a group of 10 missiles at a single central command facility. A two-person crew sat locked on constant 24-7 duty in the MAF's small and cramped underground portion which contained the controls and equipped for initiating missile launch. On Presidential command, each of the two crew members inserted a launch key which signaled crews at other MAFs to insert their launch keys. Actual missile launch could occur within less than one minute.

The Tango and 564th MS's four other MAFs are also significant as representations of the architectural evolution of the MAF. Although of blast-resistant hard construction, the underground control and command portion of the Minuteman I MAF was still highly-vulnerable to the severe ground tremors associated with the spread of nuclear radiation, while life support facilities were concentrated in the soft or non-blast resistant portion of the structure only. Minuteman II designers addressed the need for better survivability of personnel and equipment by upgrading the MAF's hard underground portion with life support facilities as well as shock absorbing devices to maintain the structure steady if hit by nuclear tremors. The new MAF was expected to sustain a livable environment for two weeks after attack. Conversion of a Minuteman II MAF to a Minuteman III retained these improvements.

The Tango MAF layout, and general exterior and interior appearances, duplicates the other four MAFs of the 564th MS. The primary differences are the orientation of the building and the artistic themes displayed in the recreation room and the Launch Control Center (LCC). The Tango MAF faces west, with the facility access on the south side of the property. The facility features a paved driveway leading to an enclosed facility that is accessed through a sliding security gate. Within the enclosed area is the MAF, paved parking/turnaround area, and above and below ground antenna.

Like the other MAFs associated with the 564th MS, the Tango MAF divides into two specific areas: the "soft" above ground area called the Launch Control Support Building (LCSB) and the "hard" below ground area, the LCC. Like the other MAFs, the layout of both the LCSB and LCC are identical save for orientation of the building. The LCSB and LCC are both utilitarian in design but have specific aesthetic and facility-specific decorations. Murals and framed images differentiate the Sierra MAF from the other four MAFs associated with the 564th MS as well as identify a specific purpose of the LCSB and the LCC.

The theme of the Tango MAF is obvious from the mission plaque in the entry vestibule: Twentieth Century rocket powered flight. Its mission reads:

> *"It is difficult to say what is impossible, for the dream of yesterday is the hope of today and the reality of tomorrow." – Robert H. Goddard*
>
> *Welcome to Tango Missile Alert Facility*
>
> *Tango Missile Alert Facility proudly showcases one of the most revolutionary achievements of the 20th century: rocket powered flight.*
>
> *Whether it be unmanned rockets launching satellites into orbit, humans riding a column of flame to the moon, or nuclear missiles in hardened silos across the Northwest, the U.S. Air Force and the 564th Missile Squadron have been key contributors.*

Two photographs on the mission plaque further highlight this mission with one photograph showing a satellite orbiting in space and another showing a rocket launch. The theme of rocket powered flight carries over into the pool room, where framed photographs of missiles in flight and missile schematics hang. The room also includes a pool table and a dartboard.

Below ground, in the LCC, Tango MAF has several murals. The first mural is located across from the elevator shaft and is a circular mural painted in green, blue, yellow, and red. The center image is of prairie leading to mountains with a cow skull, a missile, and the 564th MS emblem overlaid. Circling the image is the wording "Tango Montana Proud." The second mural is in the passageway into the LCC and bears the 564th MS seal with references to the Tango flight. The final mural found on the AC unit portrays a large Minuteman missile surrounded by 564th MS and USAF moral patches. To the right

is a large T that spells out Tango from which a hand in armor is holding four branches that end in the letters P, Q, R, and S (one letter per branch), referencing the four other squadrons in the 564th MS. The wallpaper theme in the Tango MAF represents another lake scene and prairie. The last alert initials, dates, and images at Tango MAF are some of the most elaborate found within the five MAFs.

ACRONYMS

AC	Air-conditioning
LCC	Launch Control Center
LCSB	Launch Control Support Building
LF	Launch Facility
MAF	Missile Alert Facility
MAFB	Malmstrom Air Force Base
MS	Missile Squadron
MW	Missile Wing
START	Strategic Arms Reduction Treaty
USAF	United States Air Force